

CLAIMS: I claim:

- 1 1. A wheelchair comprising:  
2 a frame member;  
3 at least one pivoting assembly having:  
4 a first linkage pivotally coupled to the frame  
5 member; and  
6 a second linkage pivotally coupled to the frame  
7 member;  
8 a drive assembly coupled to the first linkage;  
9 at least one rear caster; and  
10 at third linkage coupled to the first and second  
11 linkages wherein upward pivotal movement of the first  
12 linkage causes the third linkage to undergo upward movement  
13 and upward pivotal movement of the second linkage causes  
14 the third linkage to undergo lateral movement toward the  
15 drive assembly.
- 1 2. The wheelchair of claim 1 wherein the first linkage  
2 comprises a drive assembly mount.
- 1 3. The wheelchair of claim 1 wherein the first linkage  
2 comprises a first length and the second linkage comprises a  
3 second length and wherein the first and second lengths are  
4 different.
- 1 4. The wheelchair of claim 1 wherein the first linkage  
2 comprises a forward portion and a rearward portion and  
3 wherein the rearward portion comprises a drive assembly  
4 mount and wherein the forward portion comprises a pivot  
5 joint for connection with the third linkage.

1 5. The wheelchair of claim 4 wherein the first linkage  
2 further comprises a second pivot joint for connection with  
3 the frame member.

1 6. The wheelchair of claim 1 wherein the first linkage  
2 comprises a first pivot joint and the second linkage  
3 comprises a second pivot joint and wherein the first and  
4 second pivot joints connect the first and second linkages,  
5 respectively, to the frame.

1 7. The wheelchair of claim 6 wherein the second pivot  
2 joint is vertically offset from the first pivot joint.

1 8. The wheelchair of claim 5 wherein the second pivot  
2 joint comprises an elastomeric member.

1 9. The wheelchair of claim 6 wherein the second pivot  
2 joint comprises an elastomeric member.

1 10. The wheelchair of claim 1 wherein the second linkage  
2 minimizes the lateral movement of a front caster attached  
3 to the pivoting assembly when the front caster is raised  
4 from a supporting surface of the suspension by the first  
5 linkage.

1 11. The wheelchair of claim 1 wherein the second linkage  
2 minimizes the forward lateral movement of a front caster  
3 attached to the pivoting assembly when the front caster is  
4 raised from a supporting surface of the suspension by the  
5 first linkage.

1 12. The wheelchair of claim 1 wherein the second linkage  
2 draws a front caster attached to the pivoting assembly  
3 towards the drive assembly when the front caster is raised  
4 from a supporting surface of the suspension by the first  
5 linkage.

1 13. A wheelchair comprising:  
2 a frame member;  
3 a pivoting assembly having:  
4 a first linkage pivotally coupled to the frame  
5 member, the first linkage comprising a drive assembly  
6 mount; and  
7 a second linkage pivotally coupled to the frame  
8 member;  
9 a drive assembly attached to the first linkage drive  
10 assembly mount;  
11 at least one rear caster; and  
12 at least one front caster assembly comprising a head  
13 tube, the front caster assembly head tube coupled to one of  
14 the first or second linkages wherein upward pivotal  
15 movement of the first linkage causes the front caster  
16 assembly head tube to undergo upward movement and upward  
17 pivotal movement of the second linkage causes the front  
18 caster assembly head tube to undergo lateral movement.

1 14. The wheelchair of claim 13 wherein the first linkage  
2 comprises a first length and the second linkage comprises a  
3 second length and wherein the first and second lengths are  
4 different.

1 15. The wheelchair of claim 13 wherein the first linkage  
2 further comprises a pivot joint for connection with the  
3 frame member.

1 16. The wheelchair of claim 13 wherein the first linkage  
2 comprises a first pivot joint and the second linkage  
3 comprises a second pivot joint and wherein the first and  
4 second pivot joints connect the first and second linkages,  
5 respectively, to the frame.

1 17. The wheelchair of claim 16 wherein the second pivot  
2 joint is vertically offset from the first pivot joint.

1 18. The wheelchair of claim 13 wherein the head tube is  
2 coupled to the second linkage.

1 19. The wheelchair of claim 16 wherein the second pivot  
2 joint comprises an elastomeric member.

1 20. A wheelchair comprising:  
2 a frame member;  
3 a pivoting assembly having:  
4 a first linkage pivotally coupled to the frame,  
5 the first linkage comprising a drive assembly mount; and  
6 a second linkage pivotally coupled to the frame;  
7 a drive assembly attached to the first linkage drive  
8 assembly mount;  
9 at least one rear caster; and  
10 at least one front caster assembly coupled to one of  
11 the first or second linkages wherein upward pivotal  
12 movement of one of the first or second linkages causes  
13 upward pivotal movement of the other of the first or second

14 linkages and causes the front caster assembly to undergo  
15 upward movement.

1 21. The wheelchair of claim 20 wherein the first linkage  
2 comprises a first length and the second linkage comprises a  
3 second length and wherein the first and second lengths are  
4 different.

1 22. The wheelchair of claim 21 wherein the first linkage  
2 further comprises a pivot joint for connection with the  
3 frame.

1 23. The wheelchair of claim 21 wherein the first linkage  
2 comprises a first pivot joint and the second linkage  
3 comprises a second pivot joint and wherein the first and  
4 second pivot joints connect the first and second linkages,  
5 respectively, to the frame.

1 24. The wheelchair of claim 23 wherein the second pivot  
2 joint is vertically offset from the first pivot joint.

1 25. The wheelchair of claim 20 wherein the second linkage  
2 minimizes the lateral movement of the front caster assembly  
3 when the front caster assembly is raised from a supporting  
4 surface of the suspension by the first linkage.

1 26. The wheelchair of claim 20 wherein the second linkage  
2 minimizes the forward lateral movement of the front caster  
3 assembly when the front caster assembly is raised from a  
4 supporting surface of the suspension by the first linkage.

1 27. The wheelchair of claim 20 wherein the second linkage  
2 draws the front caster assembly towards the frame when the  
3 front caster is raised from a supporting surface of the  
4 suspension by the first linkage.

1 28. A wheelchair comprising:  
2 a frame means;  
3 a front caster means;  
4 a means for driving the system over a supporting  
5 surface;  
6 a means for suspending the front caster means and the  
7 means for driving in a dependent suspension orientation so  
8 that the means for driving can cause upward movement of the  
9 front caster means; and  
10 a means for minimizing the lateral movement of the  
11 front caster means when the front caster means is moving in  
12 an upward direction.

1 29. A wheelchair comprising:  
2 a frame;  
3 a drive assembly;  
4 a first member coupled to the drive assembly and  
5 comprising a first pivot joint that connects the first  
6 member to the frame;  
7 a second member having a second pivot joint that  
8 connects the second member to the frame;  
9 at least one front caster coupled to at least one of  
10 the first and second members;  
11 a third member having a third pivot joint connecting  
12 the third member to the first member and a fourth pivot  
13 joint connecting the third member to the second member so  
14 that movement of the first member causes movement of the

15 second member and movement of the at least one front  
16 caster.

1 30. The wheelchair of claim 29 wherein the second pivot  
2 joint comprises an elastomeric member.